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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/538,914	06/13/2005	Ulrich Schoor	R.304044	5661
2119	7590	03/23/2006	EXAMINER	
RONALD E. GREIGG GREIGG & GREIGG P.L.L.C. 1423 POWHATAN STREET, UNIT ONE ALEXANDRIA, VA 22314			ROSENAU, DEREK JOHN	
			ART UNIT	PAPER NUMBER
			2834	

DATE MAILED: 03/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/538,914

Applicant(s)

SCHOOR, ULRICH

Examiner

Derek J. Rosenau

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 13 June 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 9-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 9-15, 19, 20 and 23-25 is/are rejected.
- 7) ☒ Claim(s) 16-18, 21, 22 and 26 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 June 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 6/13/05.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Information Disclosure Statement***

1. The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609.04(a) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.
2. The information disclosure statement filed 6/13/05 fails to comply with 37 CFR 1.98(a)(3) because it does not include a concise explanation of the relevance, as it is presently understood by the individual designated in 37 CFR 1.56(c) most knowledgeable about the content of the information, of each patent listed that is not in the English language. It has been placed in the application file, but the information referred to therein has not been considered.

### ***Drawings***

3. Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the

applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 9 and 11 are rejected under 35 U.S.C. 102(e) as being anticipated by Kawazoe (US 6661158).

6. With respect to claim 9, Kawazoe discloses a piezoelectric actuator (Fig 15) comprising a multilayered structure of piezoelectric layers (Fig 1B, item 11) with inner electrodes (items 21 and 22) interposed between the piezoelectric layers, and outer electrodes (items 31 and 32), and layers of an adhesive band of insulating material (item 4) contacting the inner electrodes on alternating sides, wherein regions between the outer electrodes are provided with suitable insulation (column 4, lines 2-10), the insulation being a layer being a layer covering over a predetermined region between the outer electrodes (Fig 15).

7. With respect to claim 11, Kawazoe discloses the piezoelectric actuator according to claim 9, wherein the band or adhesive tape (item 4) is comprised of a precisely measured, prefabricated material (column 7, lines 33-36).

***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 10, 12-15, 19, 20, and 23-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawazoe (US 6661158) in view of Kishimoto (US 6956166).

10. With respect to claim 10, Kawazoe discloses the piezoelectric actuator according to claim 9.

Kawazoe does not disclose expressly that the adhesive band is an adhesive tape.

Kishimoto teaches a piezoelectric device in which insulating adhesive tape is used to electrically insulate the SAW device.

At the time of invention, it would have been obvious to a person of ordinary skill in the art to combine the adhesive tape of Kishimoto with the piezoelectric actuator of Kawazoe for the benefit of creating a less complicated method of manufacturing the insulation layer.

11. With respect to claim 12, the combination of Kawazoe and Kishimoto discloses the piezoelectric actuator according to claim 10. Kawazoe discloses that the band or adhesive tape (item 4) is comprised of a precisely measured, prefabricated material (column 7, lines 33-36).

12. With respect to claim 13, Kawazoe discloses a method of producing a piezoelectric actuator according to claim 9.

Kawazoe does not disclose expressly the method comprising sticking or rolling the band in place in a bubble-free manner.

While Kishimoto does not discuss applying the adhesive tape in a bubble-free manner, it would be obvious to do so in order to create an effective bond to the surface of the device.

At the time of invention, it would have been obvious to a person of ordinary skill in the art to combine the adhesive tape of Kishimoto with the piezoelectric actuator of Kawazoe for the benefit of creating a less complicated method of manufacturing the insulation layer.

13. With respect to claim 14, the combination of Kawazoe and Kishimoto discloses a method for producing a piezoelectric actuator according to claim 10.

Kawazoe does not disclose expressly the method comprising sticking or rolling the band in place in a bubble-free manner.

While Kishimoto does not discuss applying the adhesive tape in a bubble-free manner, it would be obvious to do so in order to create an effective bond to the surface of the device.

At the time of invention, it would have been obvious to a person of ordinary skill in the art to combine the adhesive tape of Kishimoto with the piezoelectric actuator of Kawazoe for the benefit of creating a less complicated method of manufacturing the insulation layer.

14. With respect to claim 15, the combination of Kawazoe and Kishimoto discloses a method for producing a piezoelectric actuator according to claim 11.

Kawazoe does not disclose expressly the method comprising sticking or rolling the band in place in a bubble-free manner.

While Kishimoto does not discuss applying the adhesive tape in a bubble-free manner, it would be obvious to do so in order to create an effective bond to the surface of the device.

At the time of invention, it would have been obvious to a person of ordinary skill in the art to combine the adhesive tape of Kishimoto with the piezoelectric actuator of Kawazoe for the benefit of creating a less complicated method of manufacturing the insulation layer.

15. With respect to claim 19, the combination of Kawazoe and Kishimoto discloses the method according to claim 13.

Kawazoe does not disclose expressly that the band is applied through local or general area heating and/or pressure or rolling.

Kishimoto teaches a piezoelectric device in which the band is applied through local or general area heating and/or pressure or rolling. While Kishimoto does not discuss applying the adhesive tape in this manner, it is well known in the art to apply tape by local or general area pressure or rolling.

At the time of invention, it would have been obvious to a person of ordinary skill in the art to combine the adhesive tape of Kishimoto with the piezoelectric actuator of

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Kawazoe for the benefit of creating a less complicated method of manufacturing the insulation layer.

16. With respect to claim 20, the combination of Kawazoe and Kishimoto discloses the method according to claim 16.

Kawazoe does not disclose expressly that the band is applied through local or general area heating and/or pressure or rolling.

Kishimoto teaches a piezoelectric device in which the band is applied through local or general area heating and/or pressure or rolling. While Kishimoto does not discuss applying the adhesive tape in this manner, it is well known in the art to apply tape by local or general area pressure or rolling.

At the time of invention, it would have been obvious to a person of ordinary skill in the art to combine the adhesive tape of Kishimoto with the piezoelectric actuator of Kawazoe for the benefit of creating a less complicated method of manufacturing the insulation layer.

17. With respect to claim 23, the combination of Kawazoe and Kishimoto discloses the method according to claim 13.

Kawazoe does not disclose expressly that the band is supplied in the form of a strip on a roll and is cut to length before or during application onto the piezoelectric actuator.

Kishimoto teaches a piezoelectric device in which the band is supplied in the form of a strip on a roll and is cut to length before or during application onto the piezoelectric actuator. While Kishimoto does not disclose expressly that the band is



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supplied on a roll and cut to length before or during application to the device, it is well known that tape is supplied in the form of a strip on a roll, and that it would be cut to length before or during application of the tape.

At the time of invention, it would have been obvious to a person of ordinary skill in the art to combine the adhesive tape of Kishimoto with the piezoelectric actuator of Kawazoe for the benefit of creating a less complicated method of manufacturing the insulation layer.

18. With respect to claim 24, the combination of Kawazoe and Kishimoto discloses the method according to claim 16.

Kawazoe does not disclose expressly that the band is supplied in the form of a strip on a roll and is cut to length before or during application onto the piezoelectric actuator.

Kishimoto teaches a piezoelectric device in which the band is supplied in the form of a strip on a roll and is cut to length before or during application onto the piezoelectric actuator. While Kishimoto does not disclose expressly that the band is supplied on a roll and cut to length before or during application to the device, it is well known that tape is supplied in the form of a strip on a roll, and that it would be cut to length before or during application of the tape.

At the time of invention, it would have been obvious to a person of ordinary skill in the art to combine the adhesive tape of Kishimoto with the piezoelectric actuator of Kawazoe for the benefit of creating a less complicated method of manufacturing the insulation layer.

19. With respect to claim 25, the combination of Kawazoe and Kishimoto discloses the method according to claim 19.

Kawazoe does not disclose expressly that the band is supplied in the form of a strip on a roll and is cut to length before or during application onto the piezoelectric actuator.

Kishimoto teaches a piezoelectric device in which the band is supplied in the form of a strip on a roll and is cut to length before or during application onto the piezoelectric actuator. While Kishimoto does not disclose expressly that the band is supplied on a roll and cut to length before or during application to the device, it is well known that tape is supplied in the form of a strip on a roll, and that it would be cut to length before or during application of the tape.

At the time of invention, it would have been obvious to a person of ordinary skill in the art to combine the adhesive tape of Kishimoto with the piezoelectric actuator of Kawazoe for the benefit of creating a less complicated method of manufacturing the insulation layer.

***Allowable Subject Matter***

20. Claims 16-18, 21, 22, and 26 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

21. The following is a statement of reasons for the indication of allowable subject matter: the prior art does not disclose or suggest "the step of melting, vulcanizing, or

sintering the band in place," or "the tolerance-encumbered shape ... of the piezoelectric actuator" in combination with the remaining claim elements.

***Conclusion***

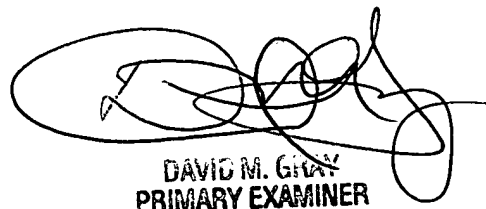
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Derek J. Rosenau whose telephone number is 571-272-8932. The examiner can normally be reached on Monday thru Friday 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Gray can be reached on 571-272-2119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Derek J Rosenau  
Examiner  
Art Unit 2834

DJR  
3/17/06



DAVID M. GRAY  
PRIMARY EXAMINER